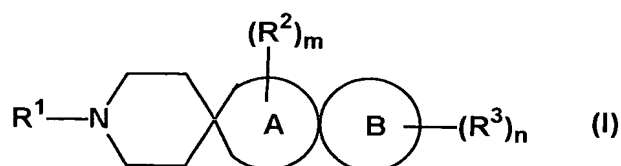


# ABSTRACT

Spiroheterocyclic ring derivatives of the formula (I)



(wherein  $R^1$  is H, alkyl, alkenyl, *etc.*;  $R^2$  is keto, thioketo, alkyl, *etc.*;  $R^3$  is alkyl, alkenyl, *etc.*; AB ring is fused bi-cyclic ring or spiro ring), quaternary ammonium salts thereof, N-oxides thereof, non-toxic salts thereof, or pharmaceutical compositions comprising them, as an active ingredient. The compounds of the formula (I) regulate the effect of chemokine/chemokine receptor, they are used for prevention and treatment of various inflammatory diseases, allergic diseases, immunosuppression, cancer metastasis and acquired immune deficiency syndrome *etc.*